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ABSTRACT

A learner-centered approach is based on the need for educational environments which promote lifelong learning, enhance critical thinking, regard teachers and learners as both teachers and learners, and encourage personal empowerment. The conceptual paradigm suggested in this document is intended for learning-space creators interested in designs which move away from limiting, passive designs toward ones that facilitate active, multi-functional, inspirational, and situated educational experiences. Shifts in theory, philosophy, and epistemology are reflected differently according to variations in the: (1) learner; (2) content; (3) media; (4) teacher; (5) context; (6) time; and (7) space. (Contains 3 figures and 11 references.) (Author/BEW)

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A Conceptual Paradigm for Developing

Learner-Centred Spaces

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Abstract

A learner-centred approach is based on the need for educational environments where the goals of instruction are to: promote life-long learning, enhance critical thinking, regard teachers and learners as both teachers and learners, and to encourage personal empowerment. The conceptual paradigm suggested here is intended for learning space developers interested in moving away from designs that encumber didactic, limiting, passive singular modes of teaching, and instead, move toward alternative designs which facilitate active, multi-functional, inspirational, situated approaches to learning. The learner-centred paradigm represents an epistemological shift from regarding pupils as the occupants of learning spaces to regarding the *actions* of pupils during instructional episodes as the prime motivation for the development of learning spaces. The learner-centred concept can be modified for application within a broad range of blueprints for constructing learning spaces. Recommendations are offered for ways in which a learner-centred approach can be achieved within southern Africa.

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Preamble Our individual freedoms, societal autonomy and collective creative potential are directly influenced by the relationship between knowledge and its applications. Spaces designed for structured learning opportunities should be built upon conceptual foundations as well as physical foundations. The conceptual foundations of learner-centred spaces assume:

- The purpose of education is to promote life-long learning.
- The purpose of teaching is to facilitate critical thinking.
- Built environments are a single component of education.
- Learning space should encourage personal empowerment.
- Instructional spaces should be inspirational.

Introduction

The purpose of this essay is to present a conceptual paradigm which focuses on the learner as the centre for the design and development of learning spaces. The paradigm is intended for learning space developers interested in moving away from designs that encumber didactic, limiting, passive singular modes of teaching, and instead, move toward alternative designs which facilitate active, multi-functional, inspirational, situated approaches to learning. A learner-centred space development paradigm is offered here as a conceptual link between architectural conventions and the development of learning spaces. A learner-centred model represents an epistemological shift from regarding pupils as the occupants of learning spaces to regarding the *actions* of pupils during instructional episodes as the prime motivation for the development of learning spaces.

Traditional learning spaces within southern Africa typically only offer opportunities for regimented, one-way, information presentation forms of teaching. "The resulting hierarchical and authoritarian relationships are evident in the use of classroom space and teachers dominating from the front and students receiving information while seated in rows" (Harber, 1995). Spaces relegated to single dyadic relationships between a teacher and a group of students tend to: a) treat teaching the same as learning, rather than treat teaching as overt and intentional; and learning as covert and personal, b) inculcate the mere transfer of information, rather than cultivating knowledge within and between individuals, c) emphasize short-term memory, rather than promote the construction of knowledge, d) dis-empower learners, rather than empower learners, and e) restrain through the construction of barriers, rather than promote exploration through learning space. The fundamental assumption posited herein subscribes to thinking consistent with Freire (1972) which purports that education should be problem-posing, rather than treating students as empty vessels or receptacles into which the teacher pours information. Spaces intended for learning should regard the individual as a critical contributor to knowledge. Spaces dedicated to arranging physical circumstances where people engage in critical thinking and acquire the capacity to negotiate contemporary technology offer an increased potential for achieving the educational goals of a community.

A learner-centred orientation to space design facilitates the realization of learner-centred structures. However, before learner-centred structures can be realized, they must be theorised and conceptualized in terms of inclusive, active and responsive learning space which focuses on learner achievement. A paradigm should provide the conceptual reference during learning space development in southern Africa.

Constructing a Conceptual Paradigm

A **paradigm** is an example, pattern or model which describes certain relations; or prescribes relationships in a normative sense. Sturdy paradigms permit replication, yet remain flexible enough to allow for variations in application. A conceptual paradigm is an arrangement of a combination of theories based on acknowledged philosophy with recognizable epistemology. The purpose of a conceptual paradigm is to organize thoughts and ideas in such a way as to test the validity of its contents under a variety of conditions (Edmonds, Branch & Mukherjee, 1994). An example of a conceptual paradigm is democracy. Democracy is based on the theory that each member of the society has the opportunity for equal participation, a philosophy which advocates inalienable rights, and the belief of self-determination. Built environments, like democratic governments, are the realizations of conceptual models.

Consider an architectural brief for the construction of a free-standing building dedicated as a library and media resource centre for an educational institution, where the fabrication of such structure occurs by arranging physical materials according to defined plans. Similarly, educational briefs consider conceptual paradigms by arranging pedagogical theories. Theories attempt to explain practice, while philosophy and epistemology offer logic, reason and ways of knowing. The design and development of new learning spaces; or the re-modelling or utilization of existing spaces intended for learning should also be supported by theory, philosophy and epistemology.

A **theory** is an idea or set of ideas based on facts and observation in order to explain a phenomenon; or opinions and suppositions about phenomena which have yet been disproved. A belief in a particular theory; or theories are often the basis for action. The principle of electricity is an example of a theory. Facts and suppositions are employed to explain the properties of electrical current, a phenomenon invisible to the naked eye, but real in terms of the potential for physical consequences when inappropriately interacted upon. Theories provide the explanations upon which paradigms are constructed and are typically based on philosophy.

Philosophy is the search for truth through logical reasoning; and is based on human perception about principles of the universe. A philosophy tends to contain numerous interconnecting theories, precise terminology, analyses of arguments and the use of narrative examples to illustrate the conditions of an argument. Philosophical boundaries constantly evolve as new ideas and new information emerge, and as arguments are challenged, dismissed or reappear in different forms. An example within the domain of moral philosophy is whether an individual infected with Auto Immune Deficiency Syndrome (AIDS) retains his or her right to privacy about the illness; or is there a societal obligation for the public to be routinely informed about persons affected with Auto Immune Deficiency Syndrome. In this case, philosophical reasoning would indirectly influence medical theory and practice, which in turn, would directly impact health care policy and ultimately, shape the structure of the physical environments within which AIDS patients acquire medical care. The philosophy for including certain entities contained within a paradigm is based on epistemology.

Epistemology is a belief system held by an individual: the way someone thinks about the world. Epistemology usually constitutes the motivation for human action. Epistemology is created within people through multi-sensory interaction with the universe as part of life's experiences. Epistemology can also exist within groups of people when common belief systems are shared. An example of an epistemology is believing women are different, but equal to men. Believing women are equal to men may originate from observations where members of both gender groups are able to perform at the same level of competence within a variety of domains. Believing woman are different from men may originate from observations where members of respective gender groups can perform certain physical acts naturally due to anatomical variations among us as a species. Epistemology is the foundation for theory and practice; including the origin of thought for constructing learning spaces. Theory, philosophy and epistemology are requisite for constructing paradigms for educational purposes. Figure 1 summarizes the principle components associated with constructing a conceptual paradigm.

Components of a Conceptual Paradigm

Paradigm	An example, pattern or model which describes certain relations; or prescribes relationships. Sturdy paradigms permit replication, yet remain flexible enough to allow for variations in application. Organizes thought and ideas in such a way as to test the validity of its contents under a variety of conditions.
Theory	An idea based on facts and observation in order to explain a phenomenon. Opinions and suppositions about phenomena which have yet been disproved. Provides the motivation for action.
Philosophy	The search for truth through logical reasoning. Based on human perception of the principles of the universe. Interconnecting theories, precise terminology, analyses of arguments and the use of narrative examples.
Epistemology	A belief system held by an individual; or meanings shared by a group. The way someone thinks about the world relative to his or her life experience. The foundation for theory and practice.

Figure 1. Summary of principles associated with constructing a conceptual paradigm.

The first stage in constructing a conceptual paradigm is to identify the theoretical premise supporting the inclusion of a particular entity which contributes to the paradigm. The second stage in constructing a conceptual paradigm is to acknowledge the philosophical orientation for each theoretical assumption. The third stage in constructing a conceptual paradigm is to recognize the epistemology that influences the philosophical arguments. The developmental order for constructing a conceptual paradigm will vary depending on whether the paradigm creator applies a deductive approach rather than an inductive approach. The paradigm for developing learner-centred spaces considers theoretical assumptions, philosophical arguments and epistemological orientation.

Considering Learning-Centred Spaces

Learning space is pre-requisite for achieving curricula goals, therefore, an architectural brief of a built environment intended for instructional episodes ought to have as its central reference point curricula goals rather than political or bureaucratic values. This notion is consistent with Graham-Jolly (1995) who purports 'form follows function' where learning space is concerned. An *Instructional Episode* is fabricated from a set of events which form a discrete teaching-learner session (instruction). The instructional episode is a complete epoch unto itself, yet part of a larger educational scheme. According

to Pratt (1992), to teach [*or instruction*] means different things depending on one's values, beliefs and intentions. Because instructional episodes are formed by entities which are dynamic and are part of concurrent multiple dyadic relationships, there arises a need for constructing an appropriate framework for making conceptual comparisons between those entities involved in instructional episodes. Instruction that enables an individual to construct, or reconstruct, his or her own knowledge, values, and beliefs demand attention to the *multiple* dyadic relations inherent in an instructional episode. The conceptual paradigm described here arranges the instructional episode in terms of the *Learner*, the *Content*, the *Media*, the *Teacher*, and the *Context* within which teaching-learning interact simultaneously during a period of *Time;* within some *Space*.

Learning space is only part of the educational scheme which interacts independently, and holistically, with other entities involved in formal learning situations. Figure 2 is an attempt to illustrate a more accurate portrayal of the conceptual juxtaposition of the participating entities typically involved with formal learning spaces.

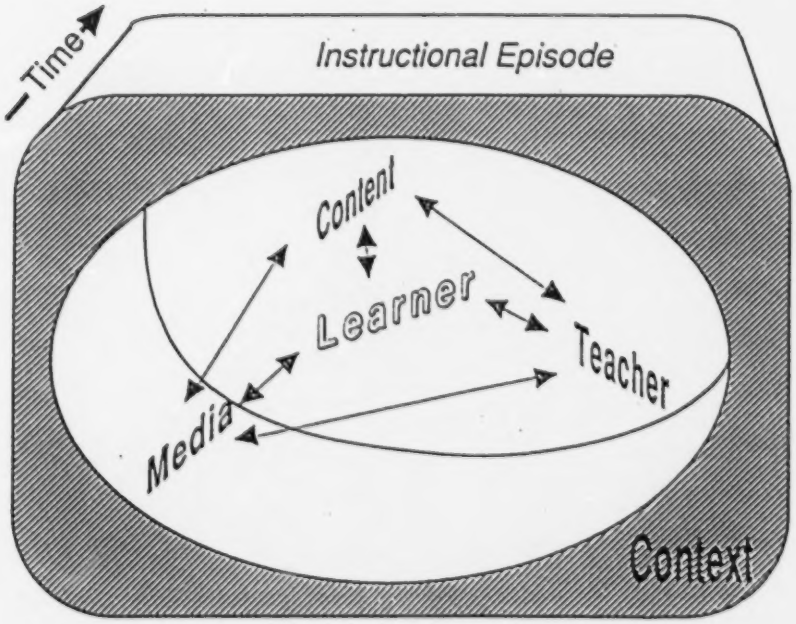

Figure 2. Conceptual paradigm of learner-centred space.

The *Learner* is the focus of the space. Learners bring multiple expectations, goals and diverse values to the learning space that affect the way they interact with the environment and within the environment; and ultimately, how they learn. Every aspect of learning space design relates directly to the learner.

The *Content*; or subject matter information, provides the organizing theme for the design and development of instruction. Content, as a body of knowledge, may be static or dynamic, but content is not a collection of unorganised facts existing in relative isolation one from the other (West, Fensham & Gerrad, 1985). Rather, there are certain orderly structures inherent within subject matter knowledge (Reigeluth, Merrill & Bunderson, 1978; Wilson, 1985). As students learn content, they also learn the structure that interrelates the content, including the messages inherent within learning space structures.

Media is often thought of as bright screens and fancy technological input-output devices. People with a non-restrictive scope of educational resources realize that the concept of media extends beyond the notion of hardware. Previous media research attempted to show that a medium alone made a difference by comparing different forms of media, where the two forms of media were implemented as equally as possible. Media comparison studies often resulted in conclusions of *no statistically significant difference* Clark (1983; 1987). Learning space should also be considered as an educational resource; or another instructional medium. However, the observations of Clark (1983; 1987) and others (Clark, 1994) did not consider learning spaces as instructional media. Learning spaces provide opportunities to situate experiences in such ways as to mediate the reality of global conditions.

The *Teacher* function has become more complicated as rapid increases of data, increased access to information and the inclusion of electronic telecommunications become part of the instructional episode. Teaching is one of the most complex human endeavours imaginable, partly because teachers arrange content information, determine the appropriateness of available resources, and make judgements about the people involved. The teacher routinely decides what will be taught, when it will be taught and how it will be taught. Teachers guide learner actions, monitor progress and manage the implementation of education within learning spaces. Therefore, the

teacher's vision of the purpose of learning space becomes a critical factor in the utilization of that learning space.

Context represents the social, geographical, political, cultural and physical environments within which instructional episodes occur. Contextual boundaries influence decisions that are made about learning spaces. For example, decisions about Government budgets may affect resource management to the extent that instructional strategies are compromised. There are boundaries which can be manipulated within the context of instruction and boundaries which may be beyond the realm of manipulation. "The way in which schools are designed and built says much about the values of the designers and about the nature of the education which is intended" (Harber, 1995). Built learning environments ought to provide spaces that *flex* under varying contextual conditions so as to remain committed to learner achievement first.

Time is the controlling variable for most instructional excursions through learning space. Time is the indefinite continual progress of existence and events in the past, the present, and the future which are regarded as a whole. Beginning and ending points; and precise units of time, are arbitrarily set for he benefit of arranging human activities. Time represents an omnipresent entity for which a comprehensive discussion is beyond the scope of this essay, but important enough to ask learning space architects and engineers to remain cognizant of the relationship between time and space as they relate to a learner-centred foundation.

Space is a continuous unlimited area or expanse which may or may not contain objects. Space represents another omnipresent entity for which a comprehensive discussion is beyond the scope of this essay, but important enough to remember that the variety of learning spaces span a continuum from physical spaces dedicated exclusively to a subject area on one end to virtual spaces existing solely as a percept at the other end. The reality is that learning too is omnipresent. Learning occurs within an individual prior to instruction and people continue to learn after instruction. Instructional episodes may begin and end, but learning occurs within some space all the time.

The conceptual paradigm presented in this essay also has theoretical, philosophical and epistemological support. The matrix in Figure 3 highlights some of the notions supporting a learner-centred concept for the development of learning spaces.

	Theory	Philosophy	Epistemology
Learner	Effective learning spaces serve curriculum innovation	Without the learner, there is no need for learning spaces	People communicate with the space which surrounds them
Content	Subject matter provides the organizing themes for all learning frames	Content is enhanced by physical and virtual structures	Knowledge structures and the structure of learning spaces are learned concurrently
Media	Instructional technology provides opportunities for experiential learning	Learning spaces should represent forms of educational resources	Learning spaces which approximate reality enhance the value of instructional episodes
Teacher	Teachers manage the events that occur within learning spaces	Teachers ought to serve primarily as discovery guides through learning spaces	Teachers should explore learning spaces along side the pupil as he or she explores learning spaces
Context	Social and geo-political issues influence the shape of educational structures	Learning space forms tend to determine learner perspective	Spaces should be developed in ways consistent with situated learning
Time	Instructional functions that occur within educational environments are bound by time	Learning spaces are utilized within designated periods of time	Time is the controlling variable for most instructional excursions through learning space
Space	Built and existing environments can facilitate learning	Learning space is intended to mediate instruction	Space is a pre-requisite for learning

Figure 3. Theoretical, philosophical and epistemological highlights of a learner-centred space paradigm.

Conclusion

A learner-centred paradigm seems most appropriate for learning space design. The learner-centred concept can be modified for application within a broad range of blueprints for constructing new learning spaces or planning the use of existing spaces intended for instructional episodes. The assumption is that space developed for learning s conceptualized prior to being realized. Learning space developers should regard the actions of learners during instructional episodes as the focal point of learning space design. The developmental process of constructing a conceptual paradigm may vary depending on what reigns supreme in your decisions for learning space design and depending on whether you believe a learner-centred concept is consistent with your philosophy of learning space design. There are many considerations for practicing learner-centred space development, but the following represent some of the most important:

1. Regard the person as more important than the space.
2. Routinely consider alternatives to industrial and militaristic spaces.
3. Base architectural briefs for learning spaces on likely instructional strategies.
4. Develop learning spaces that are consistent with the realities of the learner audience.
5. Arrange instructional environments in a way which that promote active learning.

Actualizing a learner-centred approach is likely to mean different knowledges and different skills which one may not have yet acquired, particularly as the information age and global electronic networks are formally upon us.

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